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ABSTRACT

This study guide is designed for those individuals who are preparing to take the Georgia Teacher Certification Test (TCT) in early childhhood education. Educators from across the State of Georgia participated in the preparation of this guide. The TCT in early childhood education addresses seven areas: (1) art; (2) language arts; (3) mathematics; (4) music; (5) physical education/outdoor education/health; (6) science; and (7) social studies. The study guide provides content objectives and selected references for study in each of the seven subareas. (JMK)

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STUDY GUIDE FOR TCT IN EARLY CHILDHOOD

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National Evaluation Systems, Inc., has prepared for distribution by the Georgia Department of Education the set of content objectives found in this Study Guide. These objectives have been verified as important content requirements for initial certification. Not all of the listed objectives have had test items written for them. The selected objectives have not been identified. All objectives which appear here are certification requirements and a sampling of them will be tested.

When the project to develop the Georgia Teacher Certification Tests (TCT) was begun in November 1976, an Ad Hoc Committee composed of Georgia educators was appointed to work with NES on each TCT. The function of these Ad Hoc Committees was to review all NES-generated materials with a goal of making the materials more reflective of Georgia education needs. The first step in the test development process was that of content domain specification. Educators identified all content knowledge that an applicant would need to know to function effectively in a Georgia school. This content was further defined into content objectives, which were sent to currently practicing Georgia educators for verification. These educators provided actual ratings of the "job-relatedness" of the content objectives. At that point, it was possible to identify, from the original domain specification, the extent of essentiality of specific content skills for successful performance on the job. Test items were written for the most essential objectives which spanned the content of the field.

The purpose of providing objectives is to explicitly define the content required of an applicant for certification in this field. Further, the statement of these objectives should assist in preparing for the criterion-reference content knowledge test. We encourage applicants to study these materials, which will enhance their understanding of the content field and alleviate any unnecessary concerns about the nature of the Georgia Teacher Certification Tests.

Along with these materials go hopes for a rewarding career in education.

If you have questions or desire further information, contact:

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FIELD 01

STUDY GUIDE FOR

THE GEORGIA TEACHER CERTIFICATION TEST

IN EARLY CHILDHOOD EDUCATION

INTRODUCTION

This study guide is designed for those individuals who are preparing to take the Georgia Teacher Certification Test (TCT) in early childhood education. Educators from across the state of Georgia participated in the preparation of this guide.

The TCT in early childhood education addresses the following areas:

- art
- language arts
- mathematics
- music
- physical education/outdoor education/health
- science
- social studies

The study guide provides the following information for each of the above areas of the test:

- a listing of the content objectives which were used to develop the test items for the TCT. *THESE OBJECTIVES WILL BE WRITTEN IN ITALICS.*

- selected readings matched to each area of objectives. In some instances pages are suggested to the test taker.

When preparing for the TCT it is suggested that you review each content objective. Compilation of a list of those objectives on which you feel weakest will serve as a guide for selecting specific readings from the references listed. The reference materials cited were selected primarily from a list of currently used reading materials from state approved college and university programs including teacher education curriculum laboratories. It should be remembered that there are many other excellent books which have not been listed due to space limitations. The listing of SUGGESTED REFERENCES does not mean that <u>all</u> are needed to grasp a particular concept or meet a given objective.

In addition to the content objectives and readings that will follow, you should be aware that:

- The TCT items are multiple choice with four possible answers. (See the sample questions on the following page).

- There are no penalities for guessing when unsure of an answer.

- While examinees are given 3½ hours of actual test time, they may request up to an additional hour if needed.

- Not all the subareas have the same number of test questions. In order to pass the TCT an examinee does not have to pass each subarea. The test score is determined by the number of correct answers on the test.

- The subareas are listed below according to the number of questions represented on the test from each of those areas. For example, the subarea mathematics is listed first because it has the largest number of questions.

  Mathematics
  Language Arts
  Science
  Social Studies
  Physical Education, Outdoor Education, Health
  Music
  Art

If you need assistance in test taking and/or dealing with test anxiety, please seek help through a college or university counseling center or refer to the list of test taking references that follow:

Flippo, R. F. Testwiseness. Rehoboth, MA: Twin Oaks Publishing, 1983.

Millman, J. & Pauk, W. How to take tests. New York: McGraw-Hill, 1969.

Pauk, W. How to study in college (2nd ed.). Boston: Houghton Mifflin, 1974.

Preston, R. C., & Botel, M. How to study. Chicago: SRA, 1974.

Raygor, A. L. & Wark, D. M. Systems for study. New York: McGraw-Hill, 1970.

SAMPLE QUESTIONS

Science subarea

1. Which organ produces insulin?
   a. stomach
   b. pancreas
   c. liver
   d. gall bladder

2. Which planet is closest to the sun?
   a. earth
   b. Mars
   c. Mercury
   d. Venus

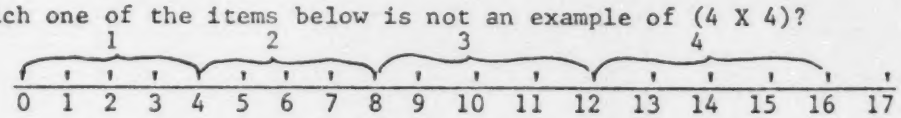
Music subarea

1. The meter signature consists of _____numbers.
   a. one
   b. two
   c. three
   d. four

2. Musical symbols called_____ express both pitch and duration.
   a. tones
   b. notes
   c. rests
   d. sharps

Math subarea

1. Which one of the items below is not an example of (4 X 4)?

   a. 

   b. 4 + 4 + 4 + 4 = 16

   c. 4^2

   d. (4 + 4)2

2. 2 1/2 X 3 1/3

   a. 8 3/4

   b. 6 1/4

   c. 6

   d. 7

I. LANGUAGE ARTS:

BASIC KNOWLEDGE OF THE ENGLISH LANGUAGE

A. GRAMMAR

--IDENTIFY THE FOUR WORD CLASSES AND IDENTIFY THE POSITION THEY USUALLY OCCUPY IN A SENTENCE (Noun, Verb, Adjective, Adverb).

--KNOW THE COMPONENT STRUCTURES OF SENTENCES .

--DISTINGUISH THROUGH CLASSIFICATION BOTH THE PARTS OF SPEECH (Noun, Verb, etc.) AND STRUCTURAL UNITS (Adverbial clause, Noun phrase, etc.) OF GIVEN SENTENCES.

--IDENTIFY USES AND ABUSES OF LANGUAGE BY CLASSIFYING WORDS ACCORDING TO THEIR FUNCTION.

Suggested References

Herman, W. The portable English handbook (2nd ed.). New York: Holt, Rinehart and Winston, 1982.

Hodges, J. and Whiteen, M.E. Harbrace college handbook (9th ed.). New York: Harcourt, Brace, Jovanovich, 1982.

B. LITERATURE

-- ANALYZE LITERARY STYLE THROUGH USE AND CHOICE OF LANGUAGE.

--IDENTIFY GENERAL CATEGORIES OF FIGURATIVE LANGUAGE IN LITERATURE.

--IDENTIFY TONE AND SETTING IN LITERATURE THROUGH USE AND CHOICE OF LANGUAGE.

--IDENTIFY A POINT OF VIEW IN A LITERARY SELECTION ESTABLISHED THROUGH USE AND CHOICE OF LANGUAGE.

--IDENTIFY AN AUTHOR'S USE OF SOUND THROUGH ALITERATION, RHYTHM, ETC.

--INTERPRET THE MEANING OF SYMBOLS, IMAGES, AND ALLUSIONS IN LITERARY PASSAGES.

--IDENTIFY THE BASIC CHARACTERISTICS OF SHORT STORIES.

--IDENTIFY THE BASIC CHARACTERISTICS OF POETRY.

Suggested References

Duhamel, P. Albert, and Hughes, Richard, Ed., Literature form and function. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1965.

Knickerbocker, K.L. and Reninger, H.W. Interpreting literature. New York: Holt, Rinehart and Winston, 1978.

C. WRITING MECHANICS AND FORMAT

--FOR A GIVEN TOPIC, DEVELOP A STRUCTURE AND GENERATE IDEAS.

--ORGANIZE WORDS INTO SENTENCES AND SENTENCES INTO PARAGRAPHS.

--IDENTIFY APPROPRIATE METHODS OF EVALUATING AND EDITING WRITING.

--APPLY CORRECT PUNCTUATION RULES.

--IDENTIFY APPROPRIATE FORMAT FOR DIFFERENT FORMS OF WRITING (i.e. letters, reports, stories, poems).

--APPLY CORRECT CAPITALIZATION IN WORDS, PHRASES, SENTENCES, AND TITLES.

Suggested References

Millwood, C. Handbook for writers (2nd ed.). New York: Holt, Rinehart and Winston, 1983.

Stityh, J. The basic writing book. Boston: Little, Brown, 1982.

D. REFERENCE SKILLS

--KNOW HOW TO USE A DICTIONARY.

--DEMONSTRATE COMPETENT USE OF REFERENCE SKILLS.

Suggested References

Langan, J. Reading and study skills. New York: McGraw-Hill, 1978.

Spargo, E. (ed.) The now student. Providence, Rhode Island: Jamestown Publishers, 1977.

E. LANGUAGE

--IDENTIFY THE BASIC CONCEPTS OF COMMUNICATION.

--IDENTIFY WHETHER MEANING IS ATTRIBUTED TO A SYMBOL BY ASSOCIATION, REPRESENTATION, OR CONVENTION.

--RECOGNIZE THAT SIMILARITIES WITHIN A DIALECT, AND DIFFERENCES BETWEEN DIALECTS ARE PRODUCTS OF GEOGRAPHICAL, SOCIAL, ETHNIC, CULTURAL, OR ECONOMIC ISOLATION, AND THAT DIALECTS CAN ENRICH THE LANGUAGE.

--DISTINGUISH THE EFFECTS OF WORD ORDER, PITCH, STRUCTURE WORDS, AND STRESS ON THE MEANING OF SENTENCES.

Suggested References

Destefano, Joanno. Language, the learner, and the school. New York: J.Wiley, 1978.

Fisher, Carol J. and Terry, C. Ann. Children's language and the language arts (2nd ed.). New York: McGraw-Hill, 1982.

F. PHONICS AND STRUCTURAL ANALYSIS

--IDENTIFY USES AND FUNCTIONS OF PREFIXES, ROOT WORDS, AND SUFFIXES IN WORD FORMATION.

--USE CONSONANTS, CONSONANT BLENDS, AND CONSONANT DIGRAPHS TO DECODE WORDS.

--USE VOWEL PRINCIPLES TO DECODE WORDS

--ANALYZE WORD ENDINGS, ROOT WORDS, PREFIXES, SUFFIXES, CONTRACTIONS, SYMBOLS, AND/OR COMPOUND WORDS IN ORDER TO DECODE WORDS.

Suggested References

Durkin, Dolores. Strategies for identifying words. Boston: Allyn and Bacon, 1976.

Hull, Marion A. Phonics for the teacher of reading. Columbus: Charles E. Merrill, 1981.

G. READING COMPREHENSION

-- INTERPRET, ANALYZE, AND MAKE CRITICAL JUDGMENTS ABOUT A GIVEN PICTURE OR PARAGRAPH.

--IDENTIFY APPROPRIATE QUESTIONS AND RESPONSES TO QUESTIONS ABOUT A GIVEN PARAGRAPH.

--RELATE AND SYNTHESIZE PERTINENT ELEMENTS FOR COMPREHENSION OF A SELECTION.

--IDENTIFY COMPONENTS SUCH AS MAIN IDEA, SUBORDINATE IDEAS, AND SUPPORTING DETAILS IN A GIVEN PASSAGE.

Suggested References

Adams, W.R. Developing reading versatility (3rd ed.).New York: Holt, Rinehart and Winston, 1981.

Sternglass, M. M. Reading, writing, and reasoning. New York: MacMillan, 1983.

H. SPELLING

--KNOW IMPORTANT SPELLING RULES AND EXCEPTIONS TO THOSE RULES.

Suggested References

Burns, Paul C. The language arts in childhood education (3rd ed.). Chicago: Rand McNally, 1975.

--CONCEPT FORMATION

--*MAKE USE OF DEVELOPMENTAL THEORY TO IDENTIFY A CHILD'S LEVEL OF CONCEPT FORMATION.*

Suggested References

Lidz, Carol Schneider. Improving assessment of school children. New York: Jossey Bass, 1981.

Lyman, Howard Burback. Test scores and what they mean. New York: Prentice-Hall, 1971.

--READING

--*RECOGNIZE CAUSES AND/OR CONDITIONS OF READING DIFFICULTY (LACK OF KNOWLEDGE ABOUT LETTER SOUNDS, LIMITED SIGHT VOCABULARY, POOR AUDITORY/VISUAL MEMORY, REVERSALS, POOR EYE-HAND COORDINATION, LIMITED ATTENTION SPAN, HYPERACTIVITY, ETC.).*

Suggested References

Durkin, D. Teaching them to read (4th ed.). Atlanta: Allyn and Bacon, 1983.

Heilman, Arthur and Blair, Timothy R. et.al. Principles and Practices of teaching reading (5th ed.) Columbus: Charles E. Merrill, 1981.

--WRITING

--*KNOW THE DEVELOPMENTAL LEVELS FOR WRITING*

Suggested References

Flood, James and Lapp, Diane. Language/Reading instruction for for the young child. New York: MacMillan, 1981.

Savage, John F. Effective communication language arts instruction in the elementary school. Chicago: Science Research Associates, Inc., 1977.

--SPELLING

--*KNOW THE DEVELOPMENTAL LEVELS FOR SPELLING.*

Suggested References

Burns, Paul C. The language arts in chi'dhood education (3rd ed.) Chicago: Rand McNally, 1975.

Rubin, Dorothy. Teaching elementary language arts (2nd ed.). New York: Holt, Rinehart and Winston, 1980.

Rubin, Dorothy. Teaching elementary language arts (2nd ed.). New York: Holt, Rinehart and Winston, 1980.

INSTRUCTION AND METHODOLOGY

A. DIAGNOSIS AND ASSESSMENT

--PSYCHO-MOTOR DEVELOPMENT

--IDENTIFY AGE-APPROPRIATE ASPECTS OF A CHILD'S GROSS MOTOR COORDINATION.

--IDENTIFY AGE-APPROPRIATE ASPECTS OF A CHILD'S FINE MOTOR COORDINATION.

Suggested References

Maxim, George W. The very young. Belmont, Cal.: Wadsworth Publishing Co., 1980, Chapter Four, "Physical and Motor Development."

Zaichkosky/Zaichkowsky/Martinek. Growth and development: the child and physical activity. St. Louis: C.V. Mosby, Co., 1980.

--READING READINESS

--IDENTIFY ASPECTS OF BEHAVIOR INDICATING READING READINESS (including interest, attitude, and sensory perception).

Suggested References

Durkin, D. Getting reading started. Atlanta: Allyn & Bacon, 1982.

Hall, MaryAnne, Ribovich, Jerilyn K. and Ramig, Christopher J. Reading and the elementary school child. New York: D. Van Nostrand Co., 1979.

--ORAL LANGUAGE

--IDENTIFY THE LEVEL OF ORAL LANGUAGE PRESENT IN A GIVEN SITUATION.

Suggested References

Destefano, Joanna. Language, the learner, and the school. New York: J. Wiley, 1978.

Fisher, Carol J. and Terry, C. Ann. Children's language and the language arts (2nd ed.) New York: McGraw-Hill, 1982.

--USING AND INTERPRETING ASSESSMENT RESULTS

--DEMONSTRATE FAMILIARITY WITH ASSESSMENT INSTRUMENTS.

--INTERPRET ASSESSMENT RESULTS FOR TEACHERS AND PARENTS.

--KNOW HOW TO CONDUCT INFORMAL SCREENINGS (vision, hearing, coordination, balance, etc.).

--IDENTIFY PERFORMANCE WHICH FALLS WITHIN NORMAL DEVELOPMENTAL RANGE FOR GIVEN SCREENING AND ASSESSMENT PROCEDURES.

--IDENTIFY APPROPRIATE FOLLOW-UP PROCEDURES (referral, prescription, etc.) FOR A GIVEN REMEDIAL SITUATION.

Suggested References

Fox, Sharon and Allen, Virginia. Integrating the language arts. New York: Holt, Rinehart and Winston, 1983.

Lamb, Pose and Arnold, Richard. Teaching reading (2nd ed.). Belmont, Cal.: Wadsworth Publishing Company, 1983.

B. CHILDREN'S LITERATURE

--RECOGNIZE MAJOR AUTHORS OF CHILDREN'S LITERATURE, AND MATCH AUTHORS WITH GENERAL TYPES OF LITERATURE OR SPECIFIC WORKS THEY PRODUCE.

--CLASSIFY THE READING LEVEL OF CHILDREN'S BOOKS.

--CLASSIFY TYPES OF CHILDREN'S LITERATURE ACCORDING TO AGE AND INTEREST.

--IDENTIFY REFERENCE MATERIALS FOR CHILDREN'S LITERATURE (anthologies, catalogues, journals, etc.).

--ANALYZE THE USES OF CREATIVE DRAMATICS FOR PRESENTING IDEAS IN CHILDREN'S LITERATURE.

--RECOGNIZE THE VALUE OF CHILDREN'S LITERATURE AND OF ROLE-PLAYING IN HELPING CHILDREN SOLVE PROBLEMS.

Suggested References

Glazer, Joan and Gurney, William. Introduction to children's literature. New York: McGraw-Hill, 1979.

Huck, Charlotte S. Children's literature in the elementary school. (3rd ed.). New York: Holt, Rinehart and Winston, 1979.

C. ROLE PLAYING

--RECOGNIZE THE IMPORTANCE OF ROLE PLAYING.

Suggested References

Moffett, James and Wagner, Betty Jane. Student-centered language arts and reading K-12: a handbook for teachers (3rd ed.). Boston: Houghton Mifflin, 1983.

Flood, James and Lapp, Diane. Language/Reading instruction for the young child. New York: MacMillan, 1981.

II. MATHEMATICS

BASIC KNOWLEDGE OF MATHEMATICS

A. SETS, NUMBERS AND NUMERALS

--USE SET VOCABULARY AND SYMBOLISM: SET, SUBSETS, MATCHING SETS, EQUIVALENT SETS, EQUAL SETS; AND USE MATHEMATICAL SYMBOLS FOR THESE CONCEPTS.

--USE FUNDAMENTAL CONCEPTS OF WHOLE NUMBERS: (1) TO CONVERT A NUMBER WRITTEN IN WORDS TO NUMBER SYMBOLS; (2) TO READ A STANDARD NUMERAL; (3) TO ESTIMATE SIZE OF A SET; (4) TO USE EXPANDED NOTATION TO IDENTIFY THE NUMBER OF 100's, 10's, 1's....; (5) TO ASSOCIATE A NUMERAL WITH THE EXPANDED FORM; (6) TO IDENTIFY THE PLACE VALUE THAT EACH DIGIT OF THE NUMERAL REPRESENTS: AND (7) TO WRITE A STANDARD NUMERAL GIVEN THE NUMBER OF 1's, 10's, 100's....

--RECOGNIZE ACCURATE DEFINITIONS FOR AND EXAMPLES OF ODD AND EVEN NUMBERS.

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982, pp. 22-57.

Gerber, Harvey. Mathematics for elementary school teachers. Philadelphia: Saunders College Publishing Co., 1982, pp. 10-19.

Heddens, James. Today's mathematics (4th ed.) Chicago: Science Research Associates, 1980. pp. 17-42, 44-60, 62-102, 104-126.

Nichols, E.D., Behr, Merlyn J., Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 4-19.

Schultz, James E. Mathematics for elementary school teachers. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 47-64, 43-116.

Wheeler, Ruric E. Modern mathematics: an elementary approach. (5th ed.). Monterey: Brooks/Cole, 1981. pp. 72-82.

B. BASIC OPERATIONS -- PROPERTIES

--GIVEN A MATHEMATICAL SENTENCE CONTAINING ONE OPERATION, IDENTIFY ONE OR TWO RELATED SENTENCES USING THE INVERSE OPERATION.

--IDENTIFY EACH OF THE PROPERTIES LISTED BELOW, SELECTING AN APPROPRIATE DESCRIPTION ON EACH.

A. Associative property of addition and of multiplication.
B. Commutative property of addition and of multiplication.
C. Distributive property of multiplication over addition.
D. Properties of the identity element of addition.
E. Properties of the identity element of multiplication.

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 20-97.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 128-160, 162-198.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982, pp. 24-83.

Schultz, James E. Mathematics for elementary school teachers. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 43-116.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 96-146.

C BASIC OPERATIONS --ALGORITHMS, WHOLE NUMBERS AND RATIONAL NUMBERS

--PERFORM BASIC OPERATIONS USING STANDARD ALGORITHMS FOR WHOLE NUMBERS AND RATIONAL NUMBERS.

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 20-97, 126-251.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 128-160, 162-198.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 25-72, 155-170.

Schultz, James E. Mathematics for elementary school teachers. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 43-116, 250-260.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 167-179, 240-264.

D. NUMBER THEORY

--DERIVE THE GREATEST COMMON FACTOR AND DERIVE THE LEAST COMMON MULTIPLE OF TWO OR MORE NUMBERS.

--USE THE FUNDAMENTAL THEOREM OF ARITHMETIC.

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 114-123.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 220-239.

McKillip, William D., Davis Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 340-345.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 120-147.

Schultz, James E. Mathematics for elementary school teachers. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 120-147.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 198-206.

E. FRACTIONS --CONCEPTS AND OPERATIONS

--GIVEN A FRACTION, INDICATE ITS POSITION ON THE NUMBER LINE, OR VICE VERSA.
--CONVERT A MIXED NUMBER TO AN IMPROPER FRACTION, AND VICE VERSA.

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 126-251.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 272-330, 332-364.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 85-123.

Schultz, James E. Mathematics for the elementary school teacher. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 150-184, 196-202.

F. FUNCTIONS AND RELATIONS

--GIVEN A RELATION DESCRIBED AS: (1) A RULE, (2) A TABLE OF VALUES, (3) A GRAPH; CONVERT TO EACH OF THE OTHER TWO FORMS

--GIVEN A FUNCTION EXPRESSED AS AN IMCOMPLETE TABLE OF VALUES, IDENTIFY THE MISSING VALUES NEEDED TO COMPLETE THE TABLE.

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers. Philadelphia: Saunders College Publishing Co., 1982. pp. 429-446.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 532-555.

Schultz, James E. Mathematics for elementary school teachers. Columbus, OH: Charles E. Merrill Publishing Co., 1982. pp. 445-454.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 72-82.

G. GEOMETRY

--IDENTIFY GEOMETRIC FIGURES WHICH ARE TOPOLOGICALLY EQUIVALENT.

--SELECT FROM A COLLECTION OF GEOMETRIC FIGURES THOSE WHICH ARE ALIKE UNDER TRANSFORMATION.

--RECOGNIZE THE FOLLOWING GEOMETRIC RELATIONSHIPS: Is Inside, Is Outside, Is Parallel To, Is Perpendicular To, Has Same Size As, Has Same Shape As.

Suggested References

Copeland, Richard. Mathematics and the elementary school teacher. (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 261-285.

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 312-427.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 394-421, 452-513.

McKillip, William D., and Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 295-312.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 178-218.

Schultz, James E. Mathematics for elementary school teachers. Columbus, OH: Charles E. Merrill Publishing Co., 1982. pp. 284-323.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 225-349, 381-386, 397-427.

H. MEASUREMENT -- ENGLISH AND METRIC

--ESTIMATE MEASUREMENTS (Including Length, Area, Volume, Mass, Temperature, and Time) USING METRIC UNITS.

--CONVERT MEASUREMENTS WITHIN THE METRIC SYSTEM.

--PERFORM BASIC COMPUTATIONS WITH DENOMINATE NUMBERS.

--MAKE "REASONABLE ESTIMATES" OF QUALITY IN ENGLISH UNITS.

--CONVERT FROM ONE UNIT TO ANOTHER WITHIN THE ENGLISH SYSTEM.

--COMPUTE THE PERIMETER, AREA, OR VOLUME OF VARIOUS FIGURES, USING APPROPRIATE FORMULAS.

--DETERMINE MEASUREMENTS (Including Length, Area, Volume, Mass, Temperature, and Time) USING IMPROVISED AND STANDARD UNITS.

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: Macmillan Publishing Co., 1982. pp. 286-294.

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 286-294.

McKillip, William D., and Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 315-317.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 224-262.

Schultz, James E. Mathematics for elementary school teachers. Columbus, OH: Charles E. Merrill Publishing Co., 1982. pp. 284-323, 325-335, 344-370.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 157-165, 364-393.

I. PROBLEM SOLVING

--WRITE A MATHEMATICAL SENTENCE FOR AND SOLVE ONE-STEP AND TWO-STEP WORD PROBLEMS USING ANY COMBINATION OF BASIC OPERATIONS FOR WHOLE NUMBERS AND RATIONAL NUMBERS.

--SOLVE NON-ROUTINE PROBLEMS BY USING APPROPRIATE STRATEGIES.

--IDENTIFY WAYS TO SUMMARIZE INFORMATION (i.e. Mean, Median, Mode, and Range) and CALCULATE EACH FROM GIVEN DATA.

--INTERPRET DATA AND PREDICT THE LIKELIHOOD OF SPECIFIED OUTCOMES BASED UPON MATHEMATICAL PROBABILITY.

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 214-230.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 200-218, 514-531.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980 pp. 96-112.

Nichols, E.E., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 277-324, 351-388.

Schultz, James E. Mathematics for elementary school teachers. Columbus: Charles E. Merrill Publishing Co., 1982. pp. 2-15, 410-445.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 477-506, 507-532.

INSTRUCTION AND METHODOLOGY

A. LEARNING THEORY

--IDENTIFY THE BEHAVIOR OF CHILDREN WITH RESPECT TO CONSERVATION OF NUMEROUSNESS.

--IDENTIFY STAGES OF DEVELOPMENT IN LEARNING MATHEMATICAL CONCEPTS.

Suggested References

Copeland, Richard W. How children learn mathematics: teaching implications of Piaget's research (3rd ed.). New York: MacMillan Publishing Co., 1978. pp. 1-57.

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 1-21.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 2-17.

B. BASIC OPERATIONS -- PROPERTIES

--RECOGNIZE HOW REGROUPING CAN BE EXPLAINED FOR COMPUTATION BY USING PLACE VALUE AND CONCRETE OBJECTS.

--DESCRIBE IN WORDS THE INVERSE RELATION WHICH EXISTS BETWEEN ADDITION AND SUBTRACTION; AND THE INVERSE RELATION WHICH EXISTS BETWEEN MULTIPLICATION AND DIVISION.

--DERIVE A MULTIPLICATION FACT USING THE CONCEPT THAT MULTIPLICATION IS REPEATED ADDITION AND DERIVE A DIVISION FACT USING THE CONCEPT THAT DIVISION IS REPEATED SUBTRACTION.

--RECOGNIZE THAT A GIVEN MULTIPLICATION PROBLEM IS AN EXAMPLE OF REPEATED ADDITION.

--RECOGNIZE THAT A GIVEN DIVISION PROBLEM IS AN EXAMPLE OF REPEATED SUBTRACTION.

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 52-133.

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 20-97.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 128-160, 162-198.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 70-81, 212-250.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 24-83.

C. BASIC OPERATIONS -- ALGORITHMS, WHOLE NUMBERS AND RATIONAL NUMBERS

--IDENTIFY MEANS OF DERIVING BASIC FACTS OF ADDITION, SUBTRACTION, DIVISION, AND MULTIPLICATION FROM SETS, PICTURES, NUMBER LINES, AND OTHER AIDS.

--IDENTIFY MEANS OF PERFORMING ADDITION, SUBTRACTION, MULTIPLICATION, AND DIVISION.

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 52-133.

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 126-251.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 128-160, 162-198.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 223-258.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: Holt, Rinehart and Winston, 1982. pp. 25-72, 155-170.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 167-179, 240-264.

D. FRACTIONS - CONCEPT AND OPERATIONS

--EXPLAIN OPERATIONS WITH FRACTIONS BY USING SETS, PICTURES, NUMBER LINES, AND OTHER CONCRETE AIDS.

--SELECT THE FRACTION WHICH REPRESENTS THE SHADED PORTION OF A FIGURE AND RELATE THE NUMERATOR AND DENOMINATOR TO THE CORRESPONDING SECTIONS OF THE FIGURE.

--SELECT THE SHADED PORTION OF A DISCRETE SET TO ILLUSTRATE A GIVEN FRACTION.

--IDENTIFY THE PLACE VALUE OF A GIVEN DIGIT IN A DECIMAL FRACTION; RECOGNIZE THE DECIMAL'S FORM IN WORDS (and vice versa); and CONVERT FRACTIONS INTO DECIMALS (and vice versa).

Suggested References

Copeland, Richard W. Mathematics and the elementary school teacher (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 159-213.

Gerber, Harvey. Mathematics for elementary school teachers (4th ed.). New York: MacMillan Publishing Co., 1982. pp. 126-251.

Heddens, James. Mathematics today (4th ed.). Chicago: Science Research Associates, 1980. pp. 272-330, 332-364.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 259-277, 281-289.

Nichols, E.D., Behr, Merlyn J. Elementary school mathematics and how to teach it. New York: MacMillan Publishing Co., 1982. pp. 85-123.

E. FUNCTIONS AND RELATIONS

--DEMONSTRATE CORRESPONDENCES SUCH AS THE FOLLOWING: (1) ONE -TO-ONE; (2) ONE -TO-MANY; (3) MANY -TO- ONE; (4) MANY-TO-MANY; and ILLUSTRATE THE THREE BASIC NUMERICAL RELATIONS OF GREATER THAN, LESS THAN, AND AS MANY AS (EQUAL TO).

--IDENTIFY EXAMPLES OF MATHEMATICAL AND NON-MATHEMATICAL RELATIONS AS THEY ARE USED IN SORTING OR CLASSIFYING OBJECTS. (COMMENT: VARIOUS METHODS OF RECORDING SHOULD BE INCLUDED.)

Suggested References

Gerber, Harvey. Mathematics for elementary school teachers. Philadelphia: Saunders College Publishing Co., 1982. pp. 426-446.

Heddens, James. Today's mathematics (4th ed.). Chicago: Science Research Associates, 1980. pp. 532-555.

McKillip, William D., Davis, Edward J. Mathematics instruction: early childhood. Morriston, NJ: Silver Burdett Co., 1980. pp. 335-339.

Schultz, James E. Mathematics for elementary school teachers. Columbus, OH: Charles E. Merrill Publishing Co., 1982. pp. 445-454.

Wheeler, Ruric E. Modern mathematics: an elementary approach (5th ed.). Monterey: Brooks/Cole, 1981. pp. 72-82.

III. SCIENCE

---*IDENTIFY METHODS OF COLLECTING DATA AND ACQUIRING SPECIFIC SCIENTIFIC INFORMATION.*

Suggested References

Devito, Alfred and Krockover, Gerald H., Creative sciencing - a practical approach. Boston: Little, Brown and Co., 1976. pp. 23-96, 121-129.

Easler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 39-101.

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.). New York: McGraw Hill Cook Co., 1978. pp. 133, 479-494.

Trojcak, Doris A. Science with children. New York: McGraw-Hill Book Co., 1979. pp. 79-110, 112, 113, 135, 148-179, 180-210, 216-240, 243-280.

---*IDENTIFY METHODS OF COLLECTING QUANTIFIABLE DATA THROUGH THE USE OF OBSERVATIONAL SKILLS.*

Suggested References

Devito, Alfred and Krockover, Gerald H. Creative sciencing - a practical approach. Boston: Little, Brown and Co., 1976. pp. 23-96, 121-129.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 39-101.

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.). New York: McGraw-Hill Book Co., 1978. pp. 474-506.

Trojcak, Doris A. Science with children. New York: McGraw-Hill Book Co., 1979. pp. 79-110, 112-114, 135, 148-179, 180-210, 216, 246, 260, 266.

---*EVALUATE THE AUTHORITATIVENESS OF SOURCES OF SCIENTIFIC INFORMATION*

Suggested References

Devito, Alfred and Krockover, Gerald H. Creative sciencing - a practical approach. Boston: Little, Brown and Co., 1976. pp. 23-96, 121-129.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 39-101.

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.). New York: McGraw-Hill Book Co., 1978. pp. 474-506.

Trojcak, Doris A. Science with children. New York: McGraw-Hill Book Co., 1979. pp. 79-110, 112-114, 135, 148-179, 180-210, 216, 246, 260, 266.

--ORGANIZE DATA AND IDENTIFY METHODS OF COMMUNICATING RESULTS.

Suggested References

Devito, Alfred and Krockover, Gerald H. Creative sciencing - a practical approach. Boston: Little, Brown and Co., 1976. pp. 23-96, 121-129.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 39-101.

Miklos, Mary Osllerich Dalnoki. Preparation for criterion referenced tests. A brief review of scientific competencies for teachers of early childhood. Washington: University Press of America, 1981. (All 28 scientific competencies.)

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.). New York: McGraw-Hill Book Co., 1978. pp. 133, 474-506.

Trojcak, Doris A. Science with children. New York: McGraw-Hill Book Co., 1979. pp. 59-62, 68-72, 266, 294-296.

--INTERPRET INFORMATION (e.g. MAKE ASSOCIATIONS, COMPARISONS, AND PREDICTIONS WITH REGARD TO SPECIFIC DATA).

Suggested References

Devito, Alfred and Krockover, Gerald H. Creative sciencing - a practical approach. Boston: Little Brown and Co., 1976. pp. 23-96, 121-129.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 39-101.

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.). New York: McGraw-Hill Book Co., 1978. pp. 133, 365-373, 450-464, 479-494.

Trojcak, Doris. Science with children. New York: McGraw-Hill Book Co., 1979. pp. 216, 282, 292, 4, 6, 11, 14, 38, 68, 112-113, 149, 157-165, 177, 18, 191, 247, 266.

--RECOGNIZE THE STRUCTURE OF AN ORGANISM AS BASED ON A COMPLEX SYSTEM OF INTERDEPENDENT AND SUBORDINATE ELEMENTS (CELLS, ORGANS, TISSUES, TISSUE SYSTEMS).

--IDENTIFY THE GENERAL FUNCTION OF PARTS OF AN ORGANISM AS WELL AS HOW VARIOUS PARTS COORDINATE THEIR FUNCTIONS.

-- FOR A GIVEN ORGANISM, DETERMINE THE VARIOUS MAJOR CLASSES TO WHICH IT BELONGS.

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 341-348.

Esler, William K. Teaching elementary science (2nd. ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 171-189.

--IDENTIFY THE BASIC COMPONENTS OF A NATURAL ENVIRONMENT.

--IDENTIFY THE INTERACTION OF VARIOUS ORGANISMS IN A NATURAL COMMUNITY.

--IDENTIFY THE ABUSES OF CHANGE, OVER TIME, IN ORGANISMS.

Suggested references

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 316-330, 333-337.

Rowe, Mary Budd. Teaching science as continuous inquiry - a basic (2nd ed.) New York: McGraw-Hill Book Co., 1978. pp. 93-122.

--IDENTIFY THE COMPONENTS OF MATTER

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 491-512, 513-520.

--IDENTIFY THE STATES OF MATTER

Suggested References

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth Inc., 1977. pp. 77-88, 388-407.

--DEFINE THE BASIC CONCEPTS OF PHYSICS

Suggested References

Collier's encyclopedia (4th ed.). New York: P.F. Collier and Son, Division of the Crowell-Collier Publishing Co., 1953. p. 38.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth Inc., 1977. pp. 414-428, 474-492.

--DEFINE LEVERAGE AND BALANCE AND IDENTIFY SAMPLES OF SIMPLE MACHINES.

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 590-604, 605-613.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 497-505.

--IDENTIFY CHARACTERISTICS AND/OR PROBLEMS OF SPACE TRAVEL.

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 128, 146, 732-758, 759-765.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 266-300.

--IDENTIFY THE CONDITIONS NECESSARY FOR MOISTURE IN THE ATMOSPHERE TO OCCUR IN VARIOUS STATES, E.G. FOG, CLOUDS, PRECIPITATION, ETC.

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 195-241, 243-253.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 328-354.

--IDENTIFY CAUSES OF CLIMATIC CONDITIONS.

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 240-241, 243-254.

Easler, William K. Teaching elementary science (2nd ed.). Belmont, CA., Wadsworth, Inc., 1977. pp. 328-354.

Miller, Albert. Meteorology. Columbus, OH: Charles E. Merrill Company, 1966. pp. 104-112.

--IDENTIFY THE COMPOSITION OF THE EARTH'S SURFACE AND ITS FEATURES.

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 80-113, 115-121.

Easler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 19-7. pp. 302-323.

Foster, Robert J., Geology (2nd ed.). Columbus, OH. Charles E. Merrill Company, Inc., 1966. pp. 79-100.

--RECOGNIZE CHARACTERISTICS OF HEAT, LIGHT AND SOUND.

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 525-548, 549-555, 690-708, 707-715, 663-680, 681-697.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 389-411, 414-428, 459, 474-492.

--RECOGNIZE THE PROPERTIES OF MAGNETIC FIELDS

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 647-661, 616-645.

Dart, Francis. Electricity and electromagnetic fields. Columbus, OH: Charles E. Merrill Company, 1966. pp. 65-81.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth Inc., 1977. pp. 432-440.

--CLASSIFY THE STARS IN THE STELLAR SYSTEM.

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 171-188, 189-193.

Ebbighausen, E.G. Astronomy (2nd ed.). Columbus, OH: Charles E. Merrill Company, 1966.

Esler, William K. Teaching elementary science (2nd ed.) Belmont, CA. Wadsworth Inc., 1977. pp. 266-300.

--IDENTIFY THE COMPONENTS OF OUR SOLAR SYSTEM.

Suggested References

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.) New York: Holt, Rinehart and Winston, Inc., 1969. pp. 124-156, 157-167.

Ebbighausen, E.G. Astronomy (2nd ed.). Columbus, OH: Charles E. Merrill Company, 1969.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 266-300.

--*IDENTIFY THE EFFECTS OF OCEAN MOVEMENTS*

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 148-152.

Ebbighausen, E.G. Astronomy (2nd ed.). Columbus, OH: Charles E. Merrill Company, 1966. pp. 20-21.

Esler, William K. Teaching elementary science (2nd ed.) Belmont, CA: Wadsworth, Inc., 1977. pp. 288-289.

--*IDENTIFY THE STRUCTURE AND FUNCTION OF THE PARTS OF THE HUMAN BODY.*

Suggested References

Blough, Glenn O. and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 341-378, 379-387.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 236-258.

--*IDENTIFY NEEDS THAT ARE GENERAL TO ALL SPECIES AS OPPOSED TO THOSE UNIQUE TO HUMAN BEINGS.*

--*IDENTIFY PREDICTABLE PATTERNS OF PHYSICAL DEVELOPMENT IN HUMANS.*

--*IDENTIFY PRINCIPLES AND PRACTICES OF PERSONAL HYGIENE.*

Suggested References

Bee, Helen. The developing child (2nd ed.). New York: Harper and Row, 1978. pp. 391-406.

Blough, Glenn O., and Schwartz, Julius. Elementary school science and how to teach it (4th ed.). New York: Holt, Rinehart and Winston, Inc., 1969. pp. 341-378, 379-387.

Esler, William K. Teaching elementary science (2nd ed.). Belmont, CA: Wadsworth, Inc., 1977. pp. 236-259.

IV. SOCIAL STUDIES

--IDENTIFY THE USE OF MAPS, GLOBES AND PHOTOGRAPHS: MAPS AND GLOBES REPRESENT REALITY, CARDINAL DIRECTIONS, MAP SYMBOLS, ELEVATION, LOCATIONS, SCALES, PHYSICAL FEATURES, SHAPE OF POLITICAL UNITS; AND INTERPRET MAPS FOR INFORMATION.

Suggested References

James, Preston E. and Davis, N. Global geography. New York: MacMillan Publishing Co., 1983.

Drummond, Dorothy W. and Drummond, R.R. People on earth: a world geography. Glenville, Illinois: Scott, Foresman and Co., 1983.

--IDENTIFY HOW PEOPLE HAVE LEARNED TO USE THEIR HUMAN AND NATURAL ENVIRONMENTS TO MEET THEIR NEEDS AND WANTS.

Suggested References

Walken, Lawrence and Glocker, J. Invitation to economics. Glenville, Illinois: Scott, Foresman and Co., 1982.

James, Preston E. and Davis, N. Global geography. New York: MacMillan Publishing Co., 1981.

---IDENTIFY WAYS OF GENERATING INCOME.

Suggested References

Walken, Lawrence and Glocker, J. Invitation to economics. Glenville, Illinois: Scott, Foresman and Co., 1982.

--IDENTIFY DIFFERENT TRADING SYSTEMS.

Suggested References

Walken, Lawrence and Glocker, J. Invitation to economics. Glenville, Illinois: Scott, Foresman and Co., 1982.

Seefeldt, Carol. Social studies for the preschool-primary child. Columbus, OH: Charles E. Merrill Publishing Co., 1977.

--IDENTIFY THE EFFECTS OF WORLD EVENTS ON AMERICAN HISTORY AND VICE VERSA.

Suggested References

Kownslar, Allan O. and Smart, T.L. People and our world: a study of world history. New York: Holt, Rinehart and Winston, 1982.

Risjord, Norman K. and Hawthorne, T.L. People and our country. New York: Holt, Rinehart and Winston, 1982.

--*IDENTIFY THE FUNCTIONS OF GOVERNMENT.*

Suggested References

Sanford, William R. and Green, C.R. Basic principles of American Government. New York: Amsco School Publications, Inc., 1980.

--*IDENTIFY THE BASIC FREEDOMS, RIGHTS, AND RESPONSIBILITIES OF A UNITED STATES CITIZEN.*

Suggested References

Sanford, William R. and Green, C.R. Basic principles of American government. New York: Amsco School Publications, Inc., 1980.

--*IDENTIFY SIGNIFICANT CURRENT AND PAST EVENTS IN GEORGIA.*

Suggested References

Saye, Albert B. Georgia history and government. Austin, TX: Steck-Vaughn and Co., 1982.

--*IDENTIFY WAYS IN WHICH CULTURAL CUSTOMS, VALUES, RULES, AND LAWS ARE TRANSMITTED AND REINFORCED.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Rose, Peter I., Glazer, P., and Glazer, M. Understanding society. Englewood Cliffs: Prentice-Hall, Inc., 1978.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

--*IDENTIFY WAYS IN WHICH THE FAMILY INFLUENCES THE INDIVIDUAL'S PHYSICAL, EMOTIONAL AND SOCIAL DEVELOPMENT.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

Smith, Charles A. Promoting the social development of young children: strategies and activities. Palo Alto: Mayfield Publishing Co., 1982.

--*RECOGNIZE THAT EVERY HUMAN BEING IS UNIQUE AND THAT HUMAN BEINGS DIFFER FROM OTHER LIVING THINGS AND FROM EACH OTHER, VALUING SELF AND OTHERS.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

Smith, Charles A. Promoting the social development of young children: strategies and activities. Palo Alto: Mayfield Publishing Company, 1982.

--*IDENTIFY THE FAMILY'S FUNCTION AND ROLE IN SOCIETY, VALUING THE FAMILY AS A SOCIAL GROUP.*

Suggested References

Thomas, W. LaVerne and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

Smith, Charles A. Promoting the social development of young children: strategies and activities. Palo Alto: Mayfield Publishing Co., 1982.

--*RECOGNIZE THAT THE LEARNING PROCESS AND KNOWLEDGE COME FROM SELF, FAMILY, TEACHERS, PEERS, AND MASS MEDIA.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber, M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

--*RECOGNIZE THAT PEOPLE NEED EACH OTHER AND SO FORM VARIOUS TYPES OF GROUPS AND COMMUNITIES.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

--*RECOGNIZE THAT COMMUNITY MEMBERS ORGANIZE TO PROVIDE NECESSARY SERVICES SUCH AS TRANSPORTATION, EDUCATION, COMMERCE AND PROTECTION.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

--*RECOGNIZE THAT EVERY SOCIETY HAS SOME KIND OF AUTHORITY STRUCTURE THAT CAN BE CALLED ITS GOVERNMENT, THAT MAKES RULES TO PROMOTE THE INTEREST OF SOCIETY.*

Suggested References

Sanford, William R. and Green, C.R. Basic principles of American government. New York: Amsco School Publications, Inc., 1980.

--*UNDERSTAND THE NATURE OF WORK IN A SOCIETY, VALUING THE DIFFERENT ROLES OF MEMBERS OF A SOCIETY.*

Suggested References

Thomas, W. LaVerne, and Anderson, R.J. Sociology: the study of human relationships (2nd ed.). Atlanta: Harcourt, Brace, Jovanovich, 1977.

Walsh, Huber M. Introducing the young child to the social world. New York: MacMillan Publishing Co., Inc., 1980.

--*IDENTIFY MEANS OF SELF-DEVELOPMENT*

Suggested References

Engle, T.L. and Snellgrove, L. Psychology: its principles and applications. Atlanta: Harcourt, Brace, Jovanovich, 1979.

McNeil, Elton B., Fuller, G.D. and Estrada, J. Psychology: today and tomorrow. New York: Harper and Row Publishers, 1978.

Smith, Charles A. Promoting the social development of young children: strategies and activities. Palo Alto: Mayfield Publishing Co., 1982.

--*IDENTIFY THE INFLUENCES OF HEREDITY AND ENVIRONMENT ON HUMAN DEVELOPMENT.*

Suggested References

Engle, T.L. and Snellgrove, L. Psychology: its principles and applications. Atlanta: Harcourt, Brace, Jovanovich, 1979.

McNeil, Elton B., Fuller, G.D. and Estrada, J. Psychology: today and tomorrow. New York: Harper and Row Publishers, 1978.

Ragland, Rachel G. and Saxon, B. Invitation to psychology. Glenview, Illinois: Scott, Foresman and Co., 1981.

V. PHYSICAL EDUCATION, OUTDOOR EDUCATION, HEALTH EDUCATION

--IDENTIFY STAGES OF MOTOR DEVELOPMENT AND RELATE THESE STAGES TO CHILD GROWTH AND DEVELOPMENT.

SUGGESTED REFERENCES

Bee, Helen. The developing child (2nd ed.) New York: Harper and Row. 1978. pp. 111-130.

Dauer, Victor and Robert P. Pangrazi. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 20, 22, 26-27, 64, 68, 79-93, 154-159.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. pp. 3-7, 20-25, 34, 35, 45-50, 58.

Seidel, Beverly L. & Biles, Fay R. Figly, G.E. & Newman, B.J. Sports skills (2nd ed.). Dubuque: William C. Brown Co., 1980. pp. 8, 9, 13.

Wickstrom, Ralph L. Fundamental motor patterns. Philadelphia: Lea and Febiger, 1970. pp. 110-112.

--GIVEN SPECIFIC BEHAVIORS IN YOUNG CHILDREN WHICH WOULD INDICATE PHYSICAL HANDICAPS, MALNUTRITION, OR LACK OF PHYSICAL STAMINA, IDENTIFY THE PROBLEM AND REMEDIATION MOST COMMONLY RELATED TO A SYMPTOM.

SUGGESTED REFERENCES

Bee, Helen. The developing child (2nd ed.). New York: Harper and Row, 1978, pp. 363, 378.

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 114, 123.

--IDENTIFY CONSTRUCTIVE ATTITUDES FOR CHILDREN TO POSSESS TOWARDS HUMAN MOVEMENT IN THEIR LIVES.

SUGGESTED REFERENCES

Bee, Helen. The developing child (2nd ed.). New York: Harper and Row, 1978. pp. 322, 323.

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 5, 15, 106.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. pp. 14-15.

Seidel, Beverly L. and Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. pp. 11, 16, 17, 19.

--GIVEN SPECIFIC MOTOR DEVELOPMENT LEVELS, IDENTIFY TYPES OF MOVEMENT ACTIVITIES WHICH WOULD MEET THE INDIVIDUAL NEEDS AND INTERESTS OF YOUNG CHILDREN.

Suggested References

Bee, Helen, The developing child (2nd ed.). New York: Harper & Row, 1978. pp. 77-93.

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 20, 21, 22, 184-206.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. pp. 45-47, 59.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. pp. 110-111.

--IDENTIFY BASIC PRINCIPLES OF SAFETY IN PHYSICAL EDUCATION INSTRUCTION.

Suggested References:

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 14, 23, 43-45, 327, 440.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. p. 55.

Seidel, Beverly L. & Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. pp. 89-90.

--GIVEN A LISTING OF MECHANICAL PRINCIPLES RELATED TO HUMAN MOVEMENT, DEMONSTRATE KNOWLEDGE OF MECHANICAL PRINCIPLES RELATED TO HUMAN MOVEMENT BY ANALYZING THE RELATIONSHIP OF SPECIFIC MOVEMENTS AND THE MECHANICAL PRINCIPLE INVOLVED.

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 69, 70.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. p. 16.

Seidel, Beverly L. & Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. pp. 41-66, 69-80.

Wickstrom, Ralph L. Fundamental motor patterns. Philadelphia: Lea and Febiger, 1970. pp. 16-19, 36, 63, 86, 87, 106, 138-139, 160-161.

--IDENTIFY REFERENCES WHICH ARE APPROPRIATE FOR USE IN PLANNING AND TEACHING PHYSICAL EDUCATION TO YOUNG CHILDREN.

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 18-32.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. pp. 36-61, 76, 344.

Graham, George and Holt/Hale, S.W., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980.

--MATCH ACADEMIC CONCEPTS TO MOVEMENT CONCEPTS IN INTEGRATING THE LEARNING PROCESS.

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. 3, 77, 95-113, 184-206.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. p. 13.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. pp. 151-152, 153-154.

Seidel, Beverly L. and Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. pp. 7,8, 10-24, 72-90.

--UNDERSTAND CONCEPTS AND TERMINOLOGY SUCH AS STRENGTH, FLEXIBILITY, QUICKNESS, ABILITY, ENDURANCE, POISE, SOCIAL SKILLS, RESPECT, SELF-CONCEPT, BALANCE, RHYTHM, SPEED, POWER, HAND-EYE-FOOT COORDINATION, CREATIVITY, SPACE, TIME AND MASS-ENERGY RELATIONSHIP.

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 2, 5, 14, 15, 91, 103, 106, 132, 175, 218.

Gallahue, David L. Developmental movement experiences for children. New York: John Wiley & Co., 1982. pp. 14, 15, 42, 153-156, 255.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. pp. 15-17, 128, 130-132, 158, 153-171, 200, 206, 226, 228, 244-251, 297, 300, 423.

Seidel, Beverly L. and Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. pp. 7, 14, 18, 20.

--GIVEN A LISTING OF TEACHING STATIONS AND EQUIPMENT, IDENTIFY APPROPRIATE EQUIPMENT AND TEACHING AREAS FOR CONDUCTING MOVEMENT PROGRAMS FOR YOUNG CHILDREN.

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 29, 30, 89, 90, 97-99.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. Section IV, pp. 151-454.

Seidel, Beverly L. & Biles, Fay R., Figly, G.E., Newman, B.J. Sports skills (2nd ed.). Dubuque: Wm. C. Brown Co., 1980. p. 308.

--IDENTIFY THE PIAGETIAN STAGES OF COGNITIVE DEVELOPMENT AND THE MAIN CHARACTERISTICS OF EACH.

Suggested References

Bee, Helen. The developing child (2nd ed.). New York: Harper & Row, 1978. pp. 22, 23, 197-228.

Baldwin, Alfred L. Theories of child development. New York: John Wiley and Sons, Inc., 1967. pp. 190-310.

--IDENTIFY THE STAGES IN THE GROWTH OF LANGUAGE COMPETENCE AND THE IMPLICATIONS OF LANGUAGE DEVELOPMENT FOR INSTRUCTION.

Suggested References

Bee, Helen. The developing child (2nd ed.). New York: Harper & Row, 1978. pp. 155-177.

Nixon, Ruth H. and Nixon, Clifford L. Introduction to early childhood education. New York: Random House, 1971. pp. 158-159.

--IDENTIFY SEVERAL "THEORIES OF LEARNING" AND DIFFERENTIAL IMPLICATIONS OF THESE THEORIES FOR INSTRUCTIONAL PROCEDURES.

Suggested References

Bee, Helen. The developing child (2nd ed.). New York: Harper & Row, 1978. pp. 21, 22, 24, 25-28, 124-125, 179-191, 181-184, 305-318, 330-331, 342-343.

Baldwin, Alfred L. Theories of child development. New York: John Wiley and Sons, Inc., 1967.

--IDENTIFY THE DEVELOPMENTAL CHANGES WHICH (COMMONLY) TAKE PLACE BETWEEN THE AGES OF FOUR AND SIX AND HOW THESE CHANGES ARE RELATED TO READINESS FOR SCHOOL ENTRY.

--RELATE THE DEVELOPMENTAL CHANGES WHICH (COMMONLY) OCCUR IN GRADES K-4 TO TEACHING OF VARIOUS TOPICS AND SUBJECTS.

Suggested References

Bee, Helen. The developing child (2nd ed.). New York: Harper & Row, 1978. pp. 389-407.

Baldwin, Alfred L. Theories of child development. New York: John Wiley and Sons, Inc., 1967.

Personalizing education for children: a handbook for early childhood k-4. Georgia Department of Education, 1982.

--GIVEN SPECIFIC PROBLEMS, SYMPTOMS, AND RECOMMENDATIONS, DISTINGUISH BETWEEN WELL AND SICK STUDENTS AND HAVE A BASIC KNOWLEDGE OF ADEQUATE HEALTH EDUCATION CONTENT (DISEASE PREVENTION AND CONTROL, FAMILY HEALTH, EMOTIONAL AND MENTAL HEALTH, SUBSTANCE USE AND ABUSE, CONSUMER HEALTH AND SAFETY, COMMUNITY HEALTH, ETC.)

Suggested References

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education elementary school children (7th ed.). Minneapolis: Burgess Publishing Co., 1983. pp. 45-47, 94.

Graham, George and Holt/Hale, S.A., McEwen, Tim, Parker, M. Children moving: a reflective approach to teaching physical education. Palo Alto: Mayfield Publishing Co., 1980. p. 55.

Carroll, Charles and Miller, Dean. Health, the science of human adaptation. Dubuque, Iowa: Wm. C. Brown Co., 1982. pp. 156-162, 487-501.

Nemir, & Schaller. The school health program. Philadelphia: W.B. Sanders Co., 1970. pp. 53-58, 75-78, 95-98, 136-141.

Sorochan & Bender. Teaching elementary health science (2nd ed.) Reading, MA: Addison Wesley Publishing Co., 1979. pp. 56-57, 72-97.

Stone, O'Reilly & Brown. Elementary school health. Dubuque, Iowa: William C. Brown Co., 1976. pp. 162-163, 165-168.

--IDENTIFY BASIC HEALTH RULES AS THEY APPLY TO DEVELOPING A YOUNG CHILD'S LIVING HABITS.

Suggested References

Green, Jenne, Legos. Health education in the elementary school. New York: MacMillan Publishing Co., Inc., 1979. pp. 21-27.

Jones, Kenneth et al. Dimensions, a changing concept of health. New York: Harper and Row, 1982. pp. 268-272.

Marley, William P. Health & Physical fitness. New York: College Publishing, 1982. pp. 6-8.

Oberteuffer, Harrelson, Pollock. School health education (5th ed.) New York: Harper & Row, 1972. pp. 46-54, 69-73.

Stone, O'Reilly & Brown. Elementary school health. Dubuque, Iowa: William C. Brown Co., 1976. pp. 240-248.

Whaley, Russell. Health. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1982. pp. 3-7.

--IDENTIFY VARIOUS CONCEPTS THAT CAN BE TAUGHT IN THE OUT-OF-DOORS AND DEMONSTRATE AN AWARENESS OF HOW LEARNING CAN BE INTEGRATED THROUGH ACTUAL LIFE SKILLS, KNOWLEDGES, AND ATTITUDES.

Suggested References

Bryant, Rosalie and Oliver, Eloise M. Complete elementary physical education guide. West Nyack, New York: Parker Publishing Co. Inc., 1974. pp. 249-254.

Dauer, Victor and Pangrazi, Robert P. Dynamic physical education for elementary school children (7th ed.) Minneapolis: Burgess Publishing Co., 1983. pp. 152-181, 382, 384.

Personalizing education for children: a handbook for early childhood k-4. Georgia Department of Education, Atlanta: 1982. pp. 42-48.

Vannier, Mary Helen & Gallahue. Teaching physical education in the elementary school. Philadelphia: W.B. Sanders and Co., 1978.

--IDENTIFY THE GEORGIA LAWS RELATING TO HEARING AND DENTAL EVALUATIONS AND IMMUNIZATIONS REQUIRED OF STUDENTS ON ENTERING SCHOOL.

Suggested References

Georgia law: code of Georgia annotated. Book 11A-Title 32, Education, Georgia School Policy: Descriptor Term: Physical Education. Descriptor Code: JGCA, June, 1980. Legal Reference Georgia Code: 32-445 (1972) p. 56 for other information: 32-911 (1881, 1919, 1946, 1967, 1964, 1968, 1973, 1979).

--MATCH STATEMENTS OF CAREER OPPORTUNITIES AND VOCATIONAL PURSUITS RELATED TO LEISURE AND RECREATION WITH SPECIFIC JOBS AND HOBBIES.

Suggested References

Matrix of basic learner outcomes for career education. Arlington, TX: Partners in Career Education, 1201 N. Watson Road, 1978. Distributed by I (T) Work (s) Inc., 1240 Rio Grande, Denton, TX. pp. 10-13.

VI. MUSIC

BASIC KNOWLEDGE OF MUSIC

--IDENTIFY WAYS IN WHICH ART FORMS ARE COMBINED.

Suggested References

Gingrich, D. Relating the arts. New YOrk: The Center for Applied Research in Education, Inc., 1974. pp. 5-19, 19-29, 29-39, 39-47, 47-59.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 142-156.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 584-598, 17.

Swanson, B. Planning music in the education of children. Belmont, CA: Wadsworth Publishing Co., Inc., 1965. p. 5.

--RECOGNIZE SIMPLE CHORD STRUCTURES.

Suggested References

Bastien, J. Musicianship for the older beginner. San Diego: Kjos West, 1977. p. 44.

Bastien, J. The older beginner piano course. San Diego: Kjos West, 1977. p. 44.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 186-187, 177, 170, 63-66.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs: Prentice-Hall, Inc., 1970. pp. 422-426, 418-419.

Wisler, G. Music fundamentals for the classroom teacher. Boston: Allyn and Bacon, Inc., 1965. pp. 200-202, 64, 65.

--IDENTIFY DYNAMICS, MOOD, TEXTURE OR TIMBRE OF A PIECE OF MUSIC.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. Dynamics. pp. 31-33, 58-61.

Gingrich, D. Relating the arts. New York: The Center for Applied Research in Education, Inc., 1974. Color Timbre. pp. 9-197, 39-47.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs: Prentice-Hall, Inc., 1970. pp. 117-118, 189-190, 214-250, 124-125, 441-462, 121-122, 373, 313.

Randolph, D. This is music. New York and Toronto: The New American Library, 1964. pp. 110, 32.

Swanson, B. Planning music in the education of children. Belmont, CA: Wadsworth Publications Co., Inc., 1965. pp. 57, 62, 67.

--IDENTIFY INSTRUMENTS APPROPRIATE FOR SELECTED DESCRIBED TUNES.

Suggested References

Bergethon, B. & Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. pp. 248-256.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications Inc., 1981. pp. 64-65.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 119-129.

Nye, R. & Venice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 444, 450, 452, 447, 449, 328, 334, 387, 324, 454, 400, 407,400, 422, 360, 362.

Swanson, B. Planning music in the education of children. Belmont, CA: Wadsworth Publications Co., Inc., 1965. pp. 23-28.

--ANALYZE THE ROLE OF MUSIC IN SOCIETY.

Suggested References

Bergethon, B. & Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. pp. 1-3.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 142-157.

Nye, R. & Venice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 588, 589, 594, 598, 3-6, 17, 75-77.

Randolph, D. This is music. New York and Toronto: The New American Library, 1964. pp. 170-178.

Stilwell, M. Music making with younger children. Nashville: Convention Press, 1970. pp. 2-9.

Suggested References

Bastien, J. The older beginner piano course. San Diego: Kjos West, 19-7. pp. 13, 19, 57, 58, 64.

Bergethon, B. & Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. pp. 262-264.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 10-19.

Gingrich, D. Relating the arts. New York: The Center for Applied Research in Education, Inc., 1974. pp. 19-29.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 91-96, 86-91.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 212, 205-213.

Wisler, G. Music fundamentals for the classroom teacher. Boston: Allyn & Bacon, Inc., 1965. pp. 2-4, 10, 88-97.

INSTRUCTION AND METHODOLOGY

--*IDENTIFY REPRESENTATIONS OF PITCH IN MUSICAL NOTATION.*

Suggested References

Andrews, J. and Wardian. Introduction to music fundamentals. New York: Meredith Publishing Co., 1967.

Bastien, J. The older beginner piano course. San Diego: Kjos West, 1977. pp. 13, 32, 38.

Bayles, Kathleen M. and Ramsey, Marjorie. Music a way of life for the young child. St. Louis: The C.Y. Mosbly Co., 1982.

Bergethon, B. & Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. Appendix A p. 261.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 4-6, 7-9.

Wisler, G. Music fundamentals for the classroom teacher. Boston: Allyn and Bacon, Inc., 1965. pp. 38-44, 52-54.

--*IDENTIFY MELODY, TEMPO, RHYTHM, DYNAMICS AND KEY FROM A MUSICAL SCORE.*

Suggested References

Bastien, J. The older beginner piano course. San Diego: Kjos West, 1977. pp. 14, 54, 96, 7, 9, 18, 19, 23, 42, 64, 22, 49, 96, 29, 32, 38, 70, 71.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 20-29, 10-19, 4-9, 34-39, 15, 31-33, 58-61.

Gingrich, D. Relating the arts. New York: The Center for Applied Research in Education, Inc., 1974. pp. 19-29.

Mathews, P. You can teach music. New York: E.P. Dutton, 1960. pp. 91-96, 47-50, 167-170.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 228-303, 294-295, 314, 351-370, 120-121, 182-261, 117-119.

Stilwell, M. Music making with younger children. Nashville: Convention Press, 1970. pp. 26, 64-75, 27-28, 95-103, 32, 111-112.

--*IDENTIFY MELODIC, RHYTHMIC, DYNAMIC, OR HARMONIC CHARACTERISTICS WHICH CONTRIBUTE TO THE OVERALL STYLE OF A SELECTION OF MUSIC.*

Suggested References

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 30-31, 45-56, 4-9, 34-39, 15, 31-33, 58-61, 20-29, 10-19.

Hackett, Patricia et. al. The musical classroom: models, skills and background for elementary teaching. Englewood Cliffs, NJ: Prentice-Hall, 1979.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 91-96, 47-50, 167-170, 177.

Nye, R. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 125-127, 184-185, 481-488.

Randolph, D. This is music. New York and Toronto: The New American Library, 1964. pp. 131-170, 156, 19-20, 208, 120-131.

--*IDENTIFY BY SIGHT WHOLE, HALF, QUARTER, EIGHTH, AND SIXTEENTH NOTES AND PAUSES, AND DISTINGUISH SCALES FROM NOTES AND CHORDS.*

Suggested References

Bergethon, B. & Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. pp. 261, 264-267.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 10-19, 20-29, 4-9.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 95, 91-92, 177, 186, 33-34, 47, 169, 170.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 197-198, 424, 288-301.

Wisler, G. Music fundamentals for the classroom teacher. Boston: Allyn and Bacon, Inc., 1965. pp. 83, 120-121, 170-

--*IDENTIFY THE USES OF THE FOLLOWING INSTRUMENTS: PIANO, PITCH PIPE, RECORDER, MELODY BELLS, HARMONICA, GUITAR, DULCIMER, AND AUTOHARP.*

Suggested References

Bergethon, B. and Boardman, E. Musical growth in the elementary school. New York: Holt, Rinehart and Winston, Inc., 1963. pp. 248-256.

Bye, L. Mel Bay's theory and harmony for everyone. Pacific, MO: Mel Bay Publications, Inc., 1981. pp. 62-65.

Mathews, P. You can teach music. New York: E.P. Dutton & Co., Inc., 1960. pp. 23-24, 173-188, 119-129.

Nye, R. & Vernice, T. Music in the elementary school. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970. pp. 325, 326, 317, 318, 333, 325, 327, 411-419, 133, 409-411, 400-407, 328-329, 318-325.

Stilwell, M. Music making with younger children. Nashville: Convention Press, 1970. pp. 115-132.

Swanson, B. Planning music in the education of children. Belmont, CA: Wadsworth Publishing Co., Inc., 1965. pp. 23-28.

VII. ART

--IDENTIFY THE STAGES OF DEVELOPMENT IN CHILDREN'S ART.

Suggested References

Wachowiak, Frank and Ramsay, T. Emphasis: art (3rd ed.). Scranton, PA: International Textbook Co., 1977.

Lowenfeld, Viktor and Brittain, W.L. Creative and mental growth. New York: MacMillan Publishing Co., 1982.

Visual arts education guidelines, K-12. Atlanta: Georgia Department of Education, 1982.

--IDENTIFY MATERIALS AND ACTIVITIES APPROPRIATE FOR ART EXPERIENCES WITH CHILDREN.

Suggested References

Wachowiak, Frank and Ramsay, T. Emphasis: art (3rd ed.) Scranton, PA: International Textbook Co., 1977.

Lowenfeld, Viktor and Brittain, W.L. Creative and mental growth. New York: MacMillan Publishing Co., 1982.

Linderman, Earl W. Developing artistic and perceptual awareness Dubuque, Iowa: Wm. C. Brown Co., 1979.

Visual arts education guidelines, K-12. Atlanta: Georgia Department of Education, 1982.

--DEMONSTRATE AN AWARENESS OF HOW SPACE FUNCTIONS IN AN ARTISTIC PRODUCTION.

Suggested References

Ocvirk, Otoo G. and others. Art fundamentals: theory and practice. Dubuque, Iowa: Wm. C. Brown Co., 1979.

Chapman, Laura H. Approaches to art in education. New York: Harcourt, Brace, Jovanovich, Inc., 1978.

Visual arts in education guidelines, k-12. Atlanta: Georgia Department of Education, 1982.

--DISTINGUISH BETWEEN LIGHT AND DARK VALUE, DULL AND BRIGHT INTENSITY, WARM AND COOL QUALITY; AND RELATED AND CONTRASTING HARMONY.

Suggested References

Ocvirk, Otoo G. and others. Art fundamentals: theory and practice. Dubuque, Iowa: Wm. C. Brown Co., 1975.

Chapman, Laura H. Approaches to art in education. New York: Harcourt, Brace, Jovanovich, Inc., 1978.

Visual arts in education guidelines, k-12. Atlanta: Georgia Department of Education, 1982.

--*IDENTIFY CONTRAST OF MOVEMENT, CONTRAST OF RHYTHM, AND SETS OF CONTRASTING COLORS IN GIVEN COMPOSITION.*

Suggested References

Ocvirk, Otoo G. and others. Art fundamentals: theory and practice. Dubuque, Iowa: Wm. C. Brown Co., 1975.

Chapman, Laura H. Approaches to art in education. New York: Harcourt, Brace, Jovanovich, Inc., 1978.

Visual arts in education guidelines, K-12. Atlanta: Georgia Department of Education, 1982.

--*RECOGNIZE THE FOLLOWING TYPES OF FOCAL POINTS IN A COMPOSITION: DOMINANT SIZE, DOMINANT SHAPE, DOMINANT COLOR.*

Suggested References

Ocvirk, Otoo G. and others. Art fundamentals: theory and practice. Dubuque, Iowa: Wm. C. Brown Co., 1975.

Chapman, Laura H. Approaches to art in education. New York: Harcourt, Brace, Jovanovich, Inc., 1978.

Visual arts in education guidelines, k-12. Atlanta: Georgia Department of Education, 1982.